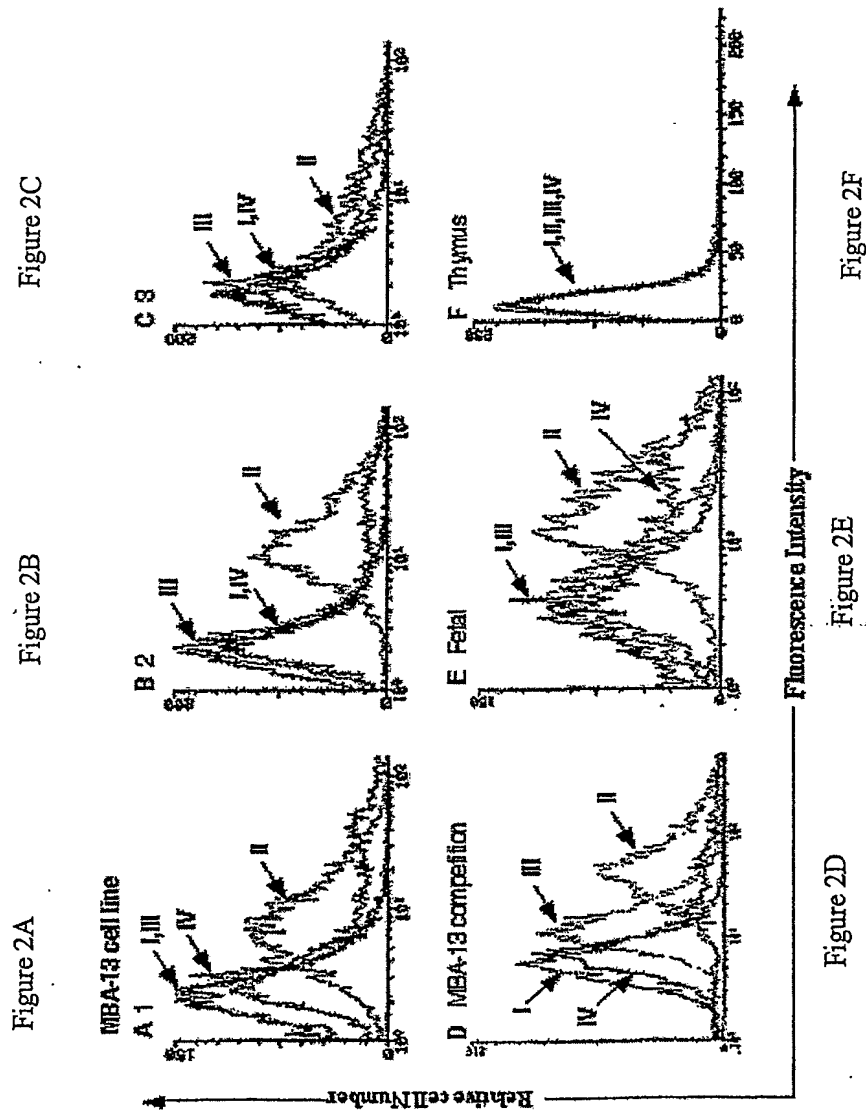


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Figure 1

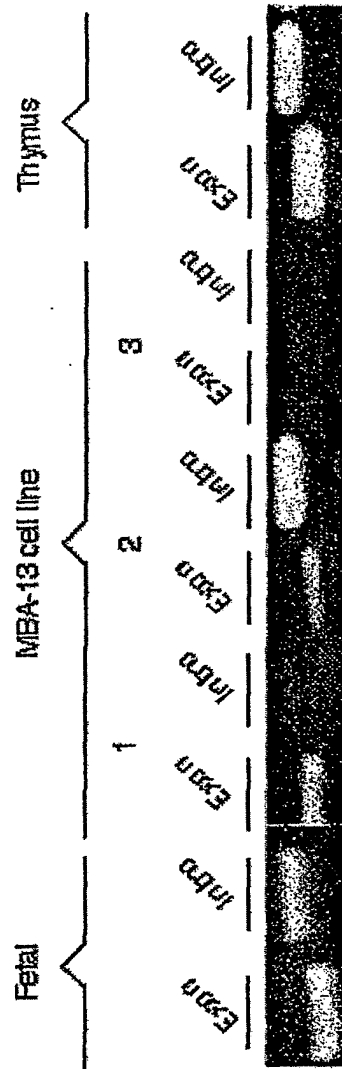
1-----Intron 5' to Jβ2.6-----
 1 M E E Y L A E P R E F V C E V E P L 18
 1 TTCCCTAAATGGGAGAATACCTCGCTGAACCCBCGGTTTGTGTGTGGGGTTGAGCCTC 60
 19 C S Y E Q Y F E P E T R L T V L E D L R 38
 61 TGTGCTCCTATGAACAGTACTTCGGTCCCGGCACCGGCTCACGGTTTATAGAGGATCTGA 120
 39 N V T P P K V S L P E P S K A E I A N K 58
 121 GAAATGTGACTCCACCCAGGCTCTCCTTGTGAGCCATCAAAAGCAGAGATTGCAACA 180
 59 Q K A T L V C L A R G F F P D H V E L S 78
 181 AACAAAAGGCTACCCCTGCTGTGCTTGGCCAGGGGCTTCTTCCCTGACACGTTGGAGCTGA 240
 79 W W V N G K E V H S G V S T D P Q A Y K 98
 241 GCTGGTGGGTGAATGGCAAGGAGGTCCACAGTGGGTGAGCAGGACCCCTCAGGCCTACA 300
 99 E S N Y S Y C L S S R L R V S A T F W H 118
 301 AGGAGAGCAATTATAGCTACTGCTGAGCAGCCGCTGAGGGTCTCTGCTACCTTCTGGC 360
 119 N P R N H F R C Q V Q F H G L S E E D K 138
 361 ACAATCCTCBAACCACTTCCGCTGCCAAGTGCAGTTCCATGGGCTTTCAGAGGAGGACA 420
 139 W P E G S F K P V T Q N I S A E A W G R 158
 421 AGTGGCCAGAGGGCTCACCCAAACCTGTACACAGAACATCAGTGCAGAGGCCTGGGGCC 480
 159 A D C G I T S A S Y H Q G V L S A T I L 178
 481 GAGCAGACTGTGGAATCACTTCAGCATCCTATCATCAGGGGTTCTGTCTCAACCATCC 540
 179 Y E I L L G K A T L Y A V L V S G L V L 198
 541 TCTATGAGATCCTACTGGGGAAGGCCACCTATATGCTGTGCTGTTCAATGGCCTGGTGC 600
 199 M A M V K K K N S + 208
 601 TGATGGCCATGGTCAAGAAAAAAATTCCTGAGACAAACTTTTATGCATCCTGAGCCGTT 660
 661 CTTCACCCTGGCCATAGATTTTCTGCACCTTCTCTAATTCCTGTTCTTAAGAACTTGTG 720
 721 TTTTCTTCTCCATGGATATCCATCCTTCTGTTGACACCTTGACTCTGAAA 773

Figure 2



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Figure 3



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Figure 4

Sequences of intronic J β sequences containing Met:

(Met: bold; J β exon: italics)

J β 2.1 KGSREVEPPFSPYHVNHQQSIRTCMGNYELIKKH Stop VE
K Stop TL CGKEVTSPFSLEATWTPTGSLQISNSLCQTLSE
Stop MDIRSQAKSGISSIS Stop DRPHARSRLPYQFWR Stop M
ENVSNPGSCIEEGBERGRILGSPFLL *CNYAEQFFGPGT*
RLTVL

J β 2.6 ELLGNCSGEFWGFWRLYPEFPSRALEREAE Stop QGDFF
Stop *M*GEYLAEPGRGFVCGVEPLCS *YEQYFGPGTRRLTVL*...

Sequences of intronic J α sequences containing Met:

J α TA31 VSKKKKKKSVTIL Stop NSEPAEGAINSSLLGSLDP
G Stop NVLEHCTGLLPSPKDDP Stop CQDRSSFLWGGGQWIFAVI
VFCLAHSPRLW Stop PETSPQSTTQEQRVKG Stop LN
Stop GERDIGHVRTRRNFTQKKNCHLGRC Stop SVSMAEVT
PPPCPRLVSQLRHGH Stop QKGGFLSSLKTNLAESHLPSS
PNEPVVSVDALGSVRRVFVAEAGSRLTRRARWGRTYRG
WTEASPC LHSSCAA Stop SSCGF Stop TGGRGGWGRGAIPK
AVACFGICSGLLCLPPWERTHLASRRLDVAGQEDTGVG
GNSFRGEGGERGGRTVVEGVTGGSMSRM Stop SE Stop VKFK
KLEIKNKKQGRGLQKVYRAGTVDFVMAWHTV *ANYGNEK*
ITFGAGTKLTIKP...

J α TA46 Stop VFLPGRWEPK Stop EVDRDISNPPCKPLV Stop LPT
VDTV Stop TI Stop RTL SHIDE GSDVVHT Stop EDSRDLSLVTVSDC
MPIVVHSRVQQTKDRDIKIRWTLS Stop PHL CNQMIFTGSLAN
GCVA Stop SLTISPLLSPWLSFGSLSLT Stop NLK Stop
SIY Stop IIRFLGCITHKKMTSRHININPEERGQRALSQT
CSELNLTTPCFNQLASAYDQLRQRATDRKWSSRHHLTR
AL Stop PHQR Stop YFRVQESFPQAGWLERGHGSALRQAME
AGWEVQHWVSDMECLTV *VTGSGGKLT LGAGTRLQVNL*...

Figure 4 cont.

JαNew05 Stop VKD Stop GYPKTK Stop VCGFAVLCSFGGCM SLPPR
 SL CITLMGLC Stop LMKSGH SKDLDEEVIITAFFHY Stop LRI Stop
 RSA Stop R Stop FINVRLMFVLR Stop Y Stop KPNNSKIRLS
 SVT Stop THIH THSH THIL THWHNHTHTHTLSQSH THTHS
 HTSTITH TLTQPHTHSLSLSLSLSLSLSLSLSLSLSLP RQ
 CNCIWFP SRNGCCVCLT Stop DMQSYQLVSWLGFCYC Stop
 FSVKTL PVKEAWCYQP Stop SCHYSNHIYT Stop PFYYFIS
 LKLAQLIRIQCWGNKTS GF Stop SSSE Stop LHSQLLVLRG
 CSKPSQTLGT KAARRKASTRGEDDVAFLGLPLGPSCLL
 VIVRPQMTVNSGGSN AKLTFGKGTKLS VKS....

JαS58 WV Stop RFHVTAVALCSF Stop TSLLHLF Stop LETLGFR
 LSFLFKKQSL Stop SK Stop QDLLCLLSFHI VTKAGRICSKLGLRL
 LAKVEWM Stop V Stop LVYRKERFVLLFF Stop P Stop Stop YS
 KVKATT VASKVLQAWSVLQGETWGNWLT FHGKTGM L FV
 VGLLLLLLSSLSLSLKET Stop YNTF Stop LSGFE Stop LGIQ
 MCITCSWQGSRAVVLNLPNVVAPSPPKTIKLFCCYFIA
 VTLLLL Stop IGM Stop ISYMLI Stop YATPVKGS LNPQRRS
 ALQDESRCRGRWSTVSNVRGAIELGRNTMPTFEEKKN
 SSLGLEQD Stop PLFLVSPLEKKPFICNGLSRLMSF
 Stop MRFHVL T Stop Stop DSLGRSLLPLQV Stop Stop VF Stop D
 Stop VGNVNCTAKIRRAGINSQPLLMLS L Stop NRNQIRML
 SSVCVHTPPRAS Stop FD Stop CQ Stop LIQIFRHLSEQTSLG
 SLCLN Stop LSRYLHNCQICFTLCCIDSA Stop Stop KQMRIC
 FPRSFSPPRRSSLP SK Stop HLFTQREDVQRVT Stop LIAA
 ASLHLYDSL PWKRLKH FIRLIS Stop TD Stop QPN Stop EERN
 RF Stop ASFLWLQFQATHLEHLVRHLRNTGARREV VSLCG
 LVFLSCTENFTQEEESK Stop VEN Stop QPGIHM YTKQS Stop
 ASALSGSTVWFP HSPTPAPFISNTYIILFSFSFEFLSA
 MP SHNPSTYHCLSNPRMDGSGTGRVLFSGPSAEPLKKC
 RLYPSS Stop VATRRLGRGQDEEK PQESGTASLW Stop YIR
 LNLLSGLKCF SFHLEPMCGSEBVFV VESATVADRLCKC
 ADIWIWHKSHSMST....

JαNew06 KCVFSCSLGLEQYCSLHPQIFSRRIQCLALQTLPV
 Stop PLKGSYSFF Stop K Stop HRRIPFNVANCGGD Stop TAQGP NLCS
 SLL Stop GQLCLLSHR Stop TSESGGLFPSLAFFVDEVVL
 STNFIVKDTHDRQLLPYFSLNKFFLC Stop Stop L Stop QHIS
 ANEFLVIQINSSVT Stop TVASYPIIQNSLTHHSA AAHCA
 SSNPDLHASSNKAKRMACYQMYFTGRKVDEPSELGSGL
 ELSYFHTGGSSQAVGLFIENMISTSHGHFQEMQFSIWS
 FTVLQISAPGSHLPETERAEGPGVFVEHDITVSSNTN
 KVVFGTGTRLQVLP....

Figure 4 cont. (2)

JaNew08 Stop VMFHFLMF Stop NSLPLS Stop RCSECRV GKLHMLG
 HGGQHSCTGYSTAQPDTTSPTTGETAPTLPD TKIFLIVYLI
 Stop RAKGKIKKLC PESILKSPRSPPYPH Stop SPADCK
 FNVIFGSY Stop K Stop Stop GFLCLMTPTVSLPSFIKGLLFC
 VWPLLASWFCPHAPLCLFQGWAGDNSFKSHFDVTDNRD
 KVLAKCNTAHGVFSRHTTSQLFSSVQKHGHSYLM SAIY
 SDTAKCSFKAGTRDFLWDLFLRLTMGWA FSGSSEMP SW
 IPALPMEILWSG Stop TAKPDMFLLYRLLQGLEIRT LREN
 KSFG Stop MGRLLDGSIRKRN D Stop QBERPKKNTGQALGW
 GGVGMSRKMVTVGIQEAGSL S Stop EGKQGFL Stop LKVPS
 QLSNLNQGHLPFPSDFPVHVGMP LPPTMVC Stop EVGRG
 IDQEYV Stop HS Stop GPLFKHETPESVRGA KSLGPRREM Q
 QSNSSQQVWRSTEQDPVLALCLTPLASPDHTAHPSSFS
 Stop PQESKVLDRPEIP Stop PGQVQKGWSGAQGWFLKTL
 WISI Stop FLIYNKF Stop LS Stop VIRKMFL L Stop TIPVKGK
 DNIYRGPLLRCQFP PWASMWGLILSASVKFLQRKEIL
 CLPGTGSNRLTFGKGTKFSLIP...

JaLB2A Stop VIVTHPLC Stop IPPTRSIFALSSSL Stop LGSLSNVVS
 VTPCPYLLSRYKWSKQILGFH Stop HSETDNCVLDILQKEGFQS
 KGSHYFY Stop LTHKEAGDNWKVPGEYLG FQKADMAQCMHS
 Stop KIP Stop LTFIEYLLYACVNAPCTLSHLRG Stop W
 LWGRFYPTFKGKVEIVTKWLRENGGPS Stop TSSRPGCPH
 CGLSQPGSC Stop GLYRMK Stop PVVLVTTSSVLSQ Stop P
 Stop CL Stop EQGVR Stop DSLCFLDSDTLKQNGECVHEQFHS
 GSMVNGQ Stop TNLKRSSLWLES Stop PFSTPLSSLPTFLS
 SWTFISGKPLHRCLC Stop Stop RSQIKN Stop ERLSPGHTKN
 LRR Stop LFFQYLKNSCVDN GRG Stop HQRQNQKQ Stop MKRR
 PSFSGMLLNGAVGGQAPL Stop SLESALQGLHSGSSGLRW
 RALWKEFLWHFRLWISCELEVLRPHDPSIEDKR VGYIC
 FFLFLLF Stop Stop PRNRPSNCSQAEAYRDFFTLRR Stop RT
 MISQCSKWGKKRREREREREREREREREREREREREREM P Stop
 RRARG Stop TKEVG Stop LCRGQI Stop SIEVFISSALE Stop N
 PSIM Stop VLVTEAVF Stop TGKQDQGSEGLPI Stop TLSKGC
 VIAF Stop Stop ERTL AVERLLLPQIICLLRCSL Stop RKSDC
 LP Stop LLGAWGKDLGKL RADRRSFSALHSQARERGWGMV
 GADLCKGGWHCVDRGSALGRLHFGAGTQLIVIP...

Figure 4 cont. (3)

JαDK1 Stop VCLFLWIPNLIHCStopDKCKLFRHVS~~GVSTVPIH~~
 PDITGSKVP~~SHAF~~PVLTRKTGSSLYCWQAQStopGSRLEDASD
 AQQPAWDCPGRESCSEMPSSLP~~LGIIL~~StopLSSPTStop
 ARPCLSVAYSIPASHTCGCANILIEASGRSStopGSSMLL
 FStopGKASHStopStopSKAGStopLDSPPPKSLHIPGSG~~LQV~~
 QTTMLVFVStopVLDMEPGCACLQGKHFIGStopAISLAHL
 PVSIF~~F~~StopERISWStopYSHLVHRQKDDVDVPRWHTVIW
 SQALIFPPSIFRCLSVKVISSSMSPGGRLACCPSSAVA
 WMASSCYPTStopLStopCIP~~IIHL~~TLYVYLLFPYSStopMYC
 HATVMLFI~~VSS~~VSSVVPIS~~StopTKIQRPNCLPCLKII~~VLE
 KKLEFCCCLYRHStopELRSLAVARTGYDFCSVStopLHTP
 StopVStopMREPVKNLQGLVSLCLPGRQSSDIWNRNHGIS
 QP....

JαTA39 StopVPDSWStopLStopRPPLSHSLYHTDDHMPYHSSKV
 ELGFNEERNStopMLLVVAVLHPMSHSMFIITLITSSDKRK~~FTR~~
 RTVTICStopTLVKMKVSTGAGAYCNSGYQKDQALARKKLNK
 StopStopVDLVKLLQIFFKNQYVSELTGEYSAAILSGFSYSYGTT
 VVEPCKRGF~~HGL~~NSMLS~~LYSS~~NQKGGIPSR
 TPKREESStopMLITSIS~~StopDHSRLSIFVRQHGT~~TIYNVF
 IWGTRHHStopRDAStopStopGCStopDPLNLPQYLStopGT~~VVK~~
 ELMVHADKHIPC~~MGKLSK~~StopGCRTGCEQDRSCRNPRNN
 SSRRADPEERAAQLKHIQVPStopICFD~~SCTGPALS~~VKRK
 CLII~~LHKLI~~StopGStopVNVCKNILQILKCYPHIKYGSIK
 QQKILKL~~GQS~~StopTLLRStopRDGVCSCGSVATGTGStopKH
 PLSLMEVYELRVTLMETGRERSHFVKTSLTVQILGLTR
 GLELGQNSKSFQ....

Figure 5

Homo sapiens beta gene segmentJ β 2.3 (bases 198551 to 198627), containing [SEQ ID NO:17]

Met GLSAVGRTRAESGTAERAAPVFFVLGLQAVSTDTQYFGPGT
 RLTVLEDLKNVFPPEVAVFEPSEAEISHTQKATLVCLATGFY
 PDHVELSWWVNGKEVHSGVSTDPQPLKEQPALNDSRYCLSS
 RLRVSATFWQNPRNHFRQCQVQFYGLSENDEWTQDRAKPVTQ
 IVSAEAWGRADCGFTSESYQQGVLSATILYEILLGKATLYAV
 LVSA LVL Met A Met VKRKDSRG Stop

Homo sapiens alpha gene segmentJ α 2 (bases 84269 to 84334)

LLFK Stop Stop VGPVSLCNGVTYGMet NTGGTIDKLTFGKGTHV
 FIIS...

J α 3 (83376. To 83437), containing [SEQ ID NO:18]

LQGIEAA Met Stop REAHRPGENLGSTLTGCFQ Stop SLHFLSSK
 Met TITTS Stop Stop YEIMet AR Met Stop KVINK Stop Stop LF Stop NIIIIII
 EALLILRFTLS Stop RERRIASLGNKRCKQQRPKPEFR Met LLWD
 PSGFQQISIKKVISKTLPTVG VQQCFQDNLWIRDQTQHPA...

J α 6(79270 to 79331), containing [SEQ ID NO:19], [SEQ ID NO:20], [SEQ ID NO: 21]

QLQEKRIKFPLLSVLAALSEAPCIS Stop LKSSRARPSECLPQA
 SRVWCLYWGAGSRHGELLPCFSADGKVVFSPGYTGAKELSS
 PQPLAPAPGLQHSGALRTAVGDFLQLREYSGGFPR Met LPNT
 Met GQLVEGGH Met KQVLSKAVLTV CIRRLHTYIWKRNPYC
 SS ...

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Figure 5 cont.

Jα8(76346 to 76405), containing [SEQ ID NO:22]

SIHGHHSCKKHV Stop LTNS Stop VW Met VKLP Stop VLSRTETL Stop
LY Stop Stop LF Stop LEY Stop Stop HFYITQGIQSRIFSWVLSDLLSS
NGLRKIKVK Stop Stop D Stop Met PPTTLVHACRHRNTLSN Stop LAC
DLAILA Met AQ Stop QGPILYRV Met SECEHRLSETCIWNWHPTS
GQS...

Jα9(75756 to 75816), containing [SEQ ID NO:23]

QYN Stop STRA Stop LLCCL Stop RNAG Stop RHFAHRTLALRDSLKIS
SSPLFIFPIRKLRPREV G Stop IV Stop GQCELGLGLEPGDPGPGAI
FCDCCLVN Stop TSDR Stop EV Stop V Met LINRKNK Stop VLQGEYKN
VLLITSTLV Stop AP Stop TCSPAYV Stop KWKEKE Met AHFVAVQIT
VGNTGGFKTIFGAGTRLFVKA...

Jα11(72705 to 72765), containing [SEQ ID NO:24]

VNSGYSTLTFGKGTMLLVSP
EHCY Stop SSDVWF Stop QKNPNIAVIPL Stop KEQGRGFFSESS
Stop DLSILCQSVLWIQDTYIFVSSAGPTCSASDHLSLICK Met RI
IFKL Met AQLKPK Stop GSGIYADY Stop SIWLINEGFLSFSLCRSW
VEIPNTANHF C Met GICYSVNSGYSTLTFGKGTMLLVSP...

Jα13(71282 to 71342), containing [SEQ ID NO:25]

D Stop KILES Stop S Stop RKRQKVWLSTSSSSDLA Stop LVNLGHSIF
IYK Met KTFNITSDFLF Stop FCGYIIGVYIYFKDKLIYVKVFCF
LNAIHSENIICL Stop NKKNYVRFRILLT Stop EFVGS Stop Stop NSHL
HVICSPRHW Stop KALSLLKYS GS NATQ Met KRAGEGKSFCKG
RHYSVNSGGYQKVTFGIGTKLQVIP...

Jα14(70532 to 70583), containing [SEQ ID NO:26]

SYS Met LLKKF Stop LIEERKIIYKD Met SNLLNSGK Met RLCTGVD
S Stop VK Met GVRAAILWLVKQDYLVKLCKSPRKK Stop VSELSR
EYHLDCSQA FHYIYCTT Met VP Stop KBAFSGLIPWLSLYSSIKK
GESSQSSHEGDS C Met LTTLIYYQGNSVIFVRQHSAVIYSTFIFG
SGTRLSVKP...

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Figure 5 cont (2)

Jα24(60203 to 60265), containing [SEQ ID NO:27]

KTSSYLNDRATVVISCHLSSAEDWV Stop P Stop VNA Stop AGGFLS
LQHLKRTPLRLH Stop PQQSGFLPLPPGRCSSWHTPSLVSS Stop KK
RN Stop KRGKGLISHI Met QLPHFVARLFPHEQFVFIQQLSSSLGK
PFCRGVCHSVTTDSWGKLQFGAGTQVVVTP...

Jα25(59046 to 59105)

QKDKASPLSLGRGQGCLSSQ
AQAGGRKL Stop GVFAEPRNTVGIT Met VRILSLVPEPDCPCCPV
STVKWR Stop K Met SPVLDVGRSCRVL R PGVHRDLRSGDGEEG
Stop KRNEKQNHKDNTEEGFIFGKENHKA V Stop L TLEE Met HSFG
GSLLRALCRGKLS C Stop VFDAEIIIT Met QKDKASPLSLGRGQ
GCLSSQ...

Jα31(51207 to 51263), containing [SEQ ID NO:28]

ELGWLCWKISLWV Stop ECTVPSNLCV Stop G Stop AHTYDSKSC
Stop QIRFSFGSFMet PRNAKEF Stop KLISLAFLKETLFALCCRAN
FSSYHKRPETQRKQKKKRKKKKKTQGESNCPLTTVLCVW Stop
GFT Met GFSKGRKCCGNNNARL Met FGDGTQLVVKP...

Jα36(45351 to 45411), containing [SEQ ID NO:29]

KLGA VSLTCNLSILEG Stop GRRIT Stop GQEFKTTLGNTVRPPSL
QKINK Stop NFFKNSQAW Stop HAPVILATEEVEAGGSLVPRRSR
LQ Stop AKNTPLHSSLDNKVRSCL Stop KYIFKNIK Stop IS Stop RRR
KE Met KKIWL SRKVFLYWAETLCQTGANNLFFGTGTRLTVIP
...

Jα40(39930 to 39990), containing [SEQ ID NO:30], [SEQ ID NO:31], [SEQ ID NO:32],
[SEQ ID NO:33]

NYKIMet SWVCLCGSS Stop TGSRGES Stop Met EYFRGFNSHLDA Stop
VLICSLNQTL Stop LIN Met HKDS Met RLKNFCKLGPNRSEDFLY
ELRYNPK Stop ITCRKIRGQGLS Met GKVVHV Met PLLF Met ESKAASI
NGNIMet LVYVETHNTVTTS G TYKYIFGTGTRLKVLA...

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Figure 5 cont. (3)

Jα41(37899 to 37961), containing [SEQ ID NO:34], [SEQ ID NO:35]

QLLSLStopYLPPTFTLEPHRIVSVHAPGCSQSRPARRSAGHRK
TPDFITCHRAPSLRWQISILITHITVGSGDLVSNGL*Met*EEGSFI
YTIKGPW*Met*THSLCDDCCVIGFQTLALIGIIGEGTWWLLQGVFCL
GRTHCGTQIPGMHSTSAKAPRCWSHP...

Jα44(35064 to 35126), containing [SEQ ID NO:36]

LGPITHQVStopQEGFIKIKPRNRKDKEFNSQCLQSStopTStopQLL
SLNHLVSTPStopPTEVKEGNQQV*Met*LVKStopVSGQSQLPSSStopE
LILWSLGKGNASVRAHPGCPSGRDHGESSEStopGSEHQ*Met*ES
QATGFCYEASHSVNTGTASKLTFGTGTRLQVTL...

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Figure 6

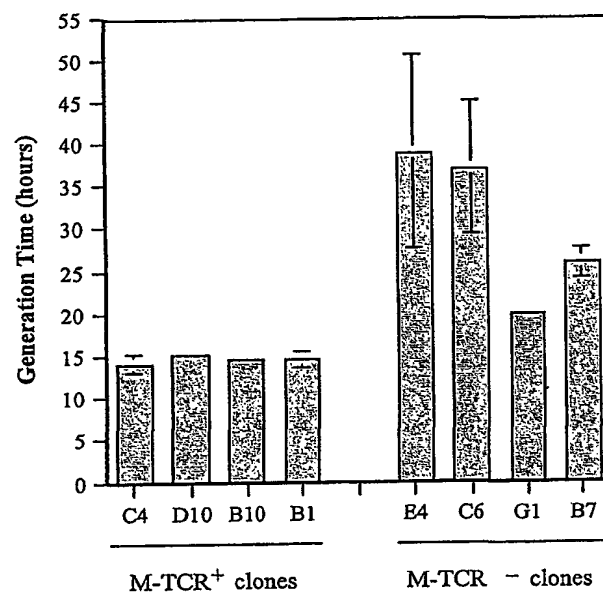


Figure 7

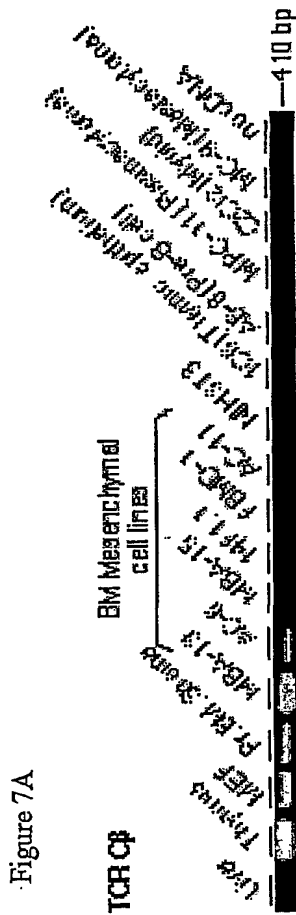
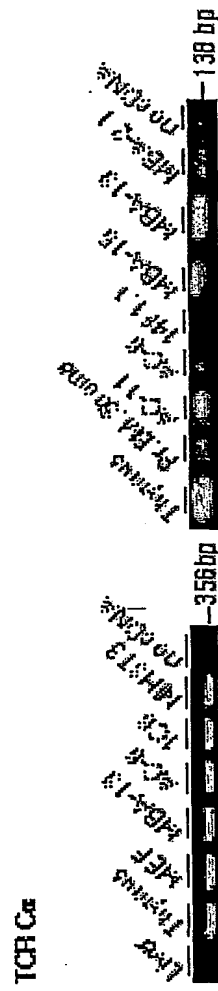


Figure 7C



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Figure 8

Figure 8A

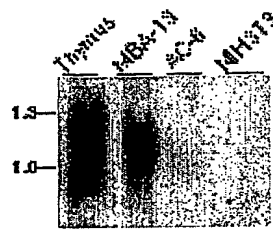


Figure 8B

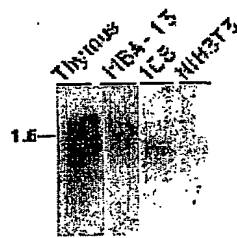
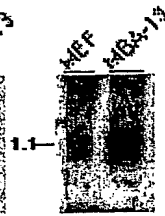


Figure 8C

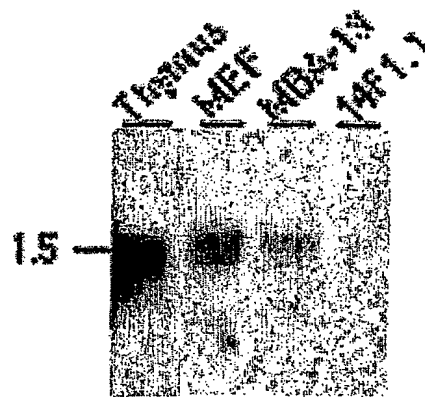
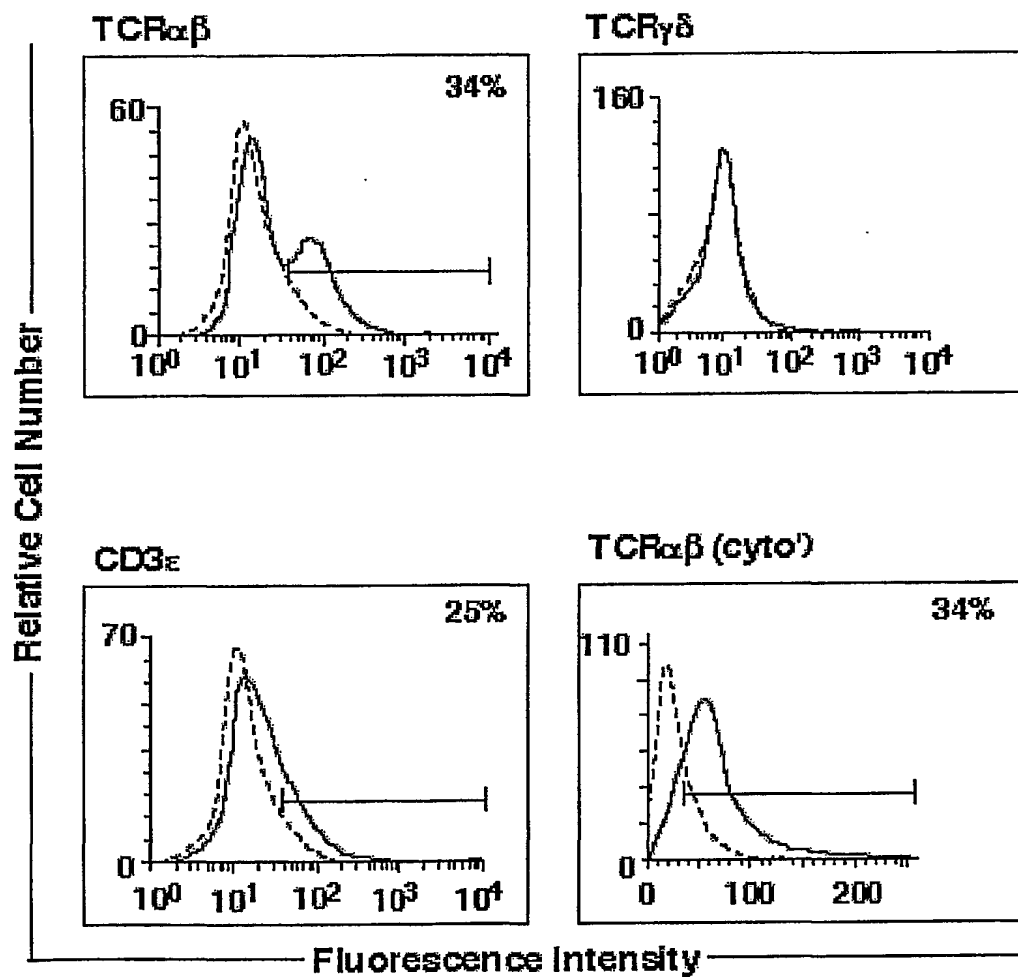


Figure 8D

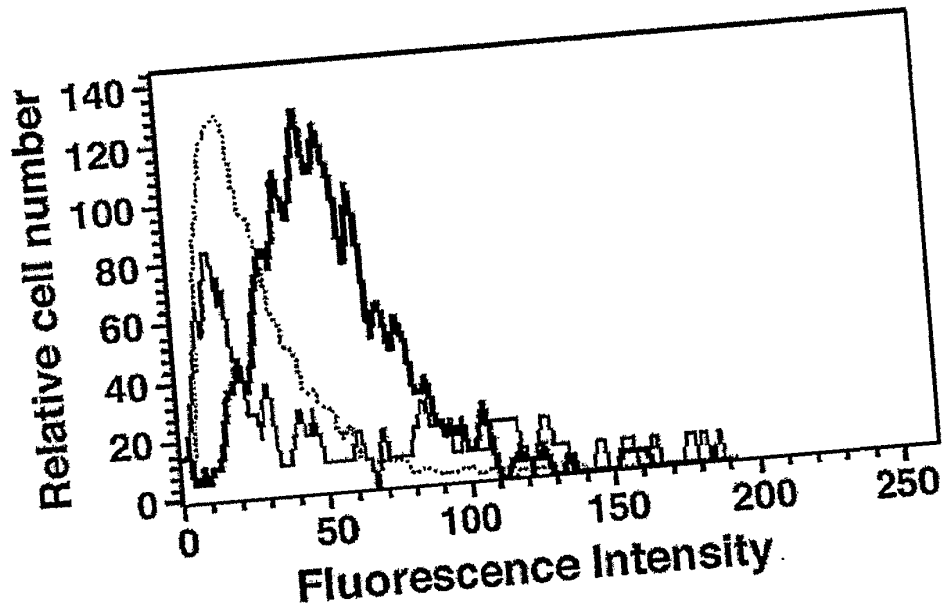
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Figure 9



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Figure 10



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Figure 11

Intron 5' to J β 2.3	J β 2.3	C β 2
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      Intron 5' to J $\beta$ 2.3
1  atggggctcttoaggggtgggaaggacccgagctgagtutgggacagcagagcgggcagca 60
1  H G L S A F G R T R A E S G T A E R A A 20
      J $\beta$ 2.3
61  ccgggttttgtcctgggcctccagggtgtgaggacagatacggagtttttggcccaggca 120
21  P F F T L G L Q A F S T D T Q Y F G P G 40
      C $\beta$ 2
121  accgggtgacagtgctcgaggacctgaaaaagctgttcccaaccgagggtcgtgtgttt 180
41  T R L T V L E D L K N V F F P E V A V F 60

181  gagccatcagagcagcagctctcccccaccccaaaaggccacactggtgtgcctggccaca 240
61  E P S E A E I S H T Q K A T L V C L A T 80

241  ggcttctaccccgcaccagctggagctgagctggtgggtgactgggaaggagggtgcacagt 300
81  G F Y P D H V E L S W W V N G K E V H S 100

301  ggggtcagcaccagaccccgagccctcaaggagcagcccgccctcaatgactccagatac 360
101  G V S T D P Q P L K E Q P A L N D S R Y 120

361  tgootgagcagcagcagcaggggtctcggccaccttctggcagcaaccccgcacccacttc 420
121  C L S S R L R V S A T F W Q N P R N H F 140

421  cgtgtcaagtcagttctacgggtctcggagagatgacgagtggaacccaggatagggcc 480
141  R C Q V Q F Y G L S E N D E W T Q D R A 160

481  aaacccgtcacccagatcgtcagggccgaggccctggggtagagcagactgtggcttcacc 540
161  K P V T Q I V S A E A W G R A D C G F T 180

541  tccgagttttaccagcaagggtcctgtgtgcaaccatccttatgagatcttgcctaggg 600
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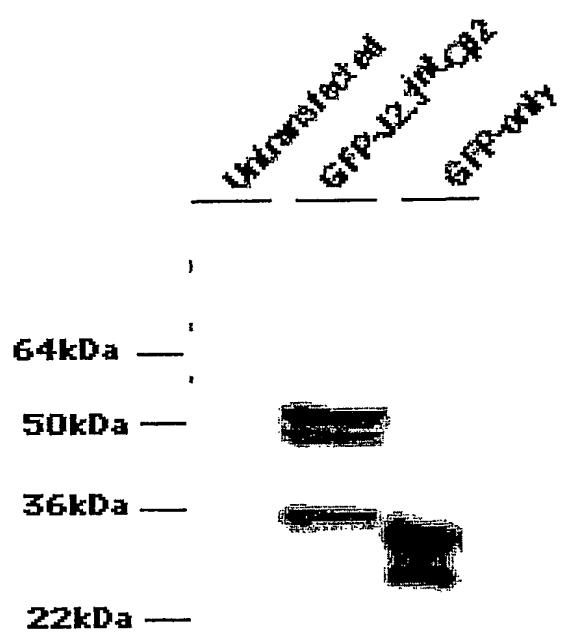
601  saggccaccttgatgcccgtgtgtgctcagtgccctcgtgtgatggccatggtcaagaga 660
201  K A T L Y A V L V S A L V L M A M V K R 220

661  saggattccagaggctag 678
221  K D S R G * 225

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Figure 12



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Figure 13

Figure 13A

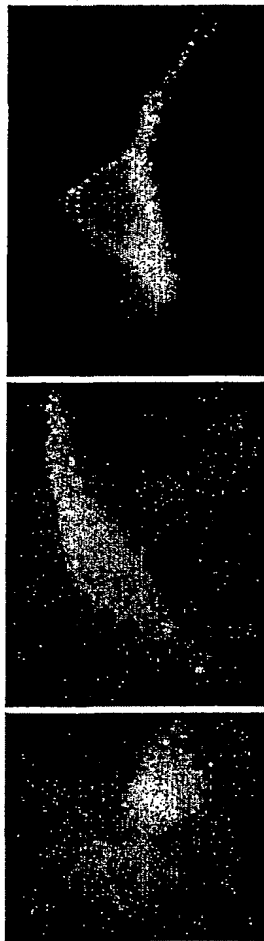


Figure 13B

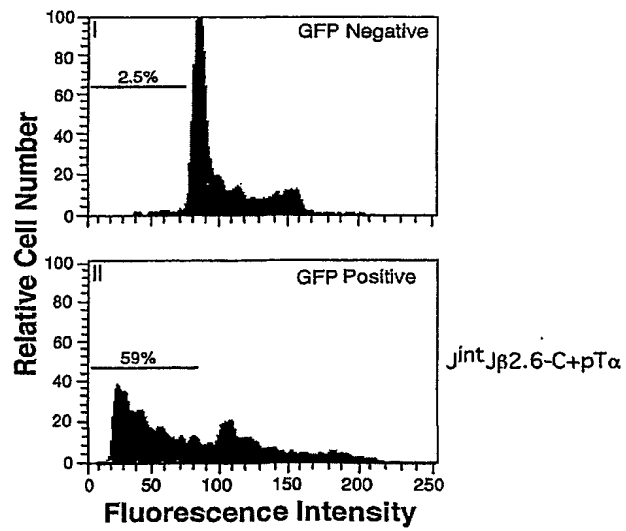
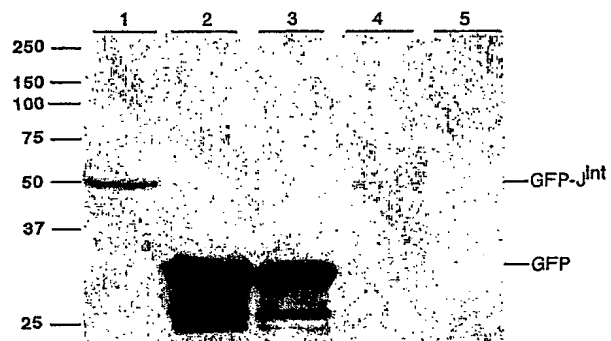


Figure 13C

Figure 14

